

#### **USDA Outlook Conference**

**New Tools for the Engaged 21st Century Land Grant University** 

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# **Overview**

- Background
- Landscape changes
- Transitions at Purdue University
  - An emerging model
  - New tools and capabilities
  - Partnership with Extension





# **Background**

- Historic Land Grant University Missions
  - Teaching, Research, Extension
- Funding partnerships
- Extension focus on:
  - Agriculture and Food Technologies
  - Families and youth
  - Rural Communities (economies tied to agriculture)
    - Lower incomes
    - By-passed by industrial revolution



# Landscape Changes

- Farm family income has increased
- Rural economies not sustainable by farms alone
- Rural sectors being left behind by current technology revolutions
- Rural communities need expertise beyond scope of Colleges of Agriculture and Family Sciences
  - Extension needs new tools and expertise
- Usual funding sources increasingly limited





# "Engaged Institution" Report

# **Engaged institutions exhibit:**

- Responsiveness
- Respect for partners
- Academic neutrality on public issues
- Accessibility
- Integrated mission with learning and discovery
- Coordination of activities within the institution
- Resource partnerships





# **Purdue Key Strategies**

- Discovery through Research
- Learning through Teaching
- Engagement through Partnerships

Form basis for University Strategic Plan





# **Engagement**

#### **Mission:**

Assist the State of Indiana in achieving economic prosperity and improving quality of life

#### Vision:

Be a model for university engagement—focused on partnerships advancing Indiana's economic prosperity and qualities as a place of choice



# **Engagement Goals:**

- Advance economic prosperity empowered by Purdue's expertise, knowledge, resources, and technology
- Enhance P-12 education opportunities and quality
- Enhance learning opportunities through expanded community service and leadership by students, faculty and staff
- Continually improve Indiana through lifelong learning that renders the state as a place of choice



- Technical Assistance Program
- Purdue Research Foundation-Office of Technology
   Commercialization
- Discovery Park
- Statewide Technology Program
- Certified Technology Parks
- Partnerships





#### • Technical Assistance Program

- Assistance to manufacturing and business
- Healthcare TAP
- Environmental assessments
- Workforce development
- Indianapolis Engagement Office
- Fort Wayne Engagement office (in process)
- Other locations (in process)





- Purdue Research Foundation
  - Office of Technology Commercialization
    - Intellectual property management –Licenses & Startups
  - PRF Incubation Facilities
    - Purdue Technology Center
    - Merrillville (Northwest Indiana Technology Center)
    - Intech Park—Indianapolis
    - Others—on horizon





# Purdue Named National Leader



#### Number 1 University incubator program

Top 12 (unranked)
In support of state's economic development



#### Discovery Park

- Birck Nano-Technology Center
- Morgan Entrepreneurship Center
- E-enterprise Center
- Bindley Biosciences Center
- Center for Advanced Manufacturing
- Discovery Learning Center
- Regenstrief Center for Healthcare Engineering
- Center for Regional Development





- Discovery Park (cont.)
  - **New Centers** 
    - Energy Center
    - Cyber Security
    - Center for the Environment (C4E)
    - Oncology
- College of Technology Statewide
  - 8 locations
  - Alternate pathways to Purdue degrees
  - Contract educational programs with companies





- Certified Technology Parks
  - Seventeen approved
  - Co-sponsored director's networking workshops
  - Hosted 4 technology showcases
    - Anderson
    - Fort Wayne
    - Lafayette
    - Indianapolis
    - 2 planned





# Corporate partnerships

- Sponsored research agreements
- Memoranda of agreement
- Internships and Interns

# Agency partnerships

- Economic development corporation
- Workforce development
- Small Business Development Centers



- Community Partnerships
- Other University Partnerships
  - Indiana University
  - Ball State
  - Anderson
  - Vincennes
  - Community Colleges



# **Entrepreneurship Center**

#### New business ventures

- Business plan competitions
- Purdue based know-how to existing companies
- Start-ups
- Corporate spinouts
- New Ventures Team
- Innovation and Commercialization Center





# Center for Regional Development

#### **Vision:**

To foster Indiana becoming the nation's leader in supporting creative, regional approaches to development, built upon three core values:

- a voluntary approach;
- the power of data, analysis, ideas and information;
- the importance of dialogue, social capital development, and collaborative partnerships



# Mission: Center for Regional Development

- Conduct applied research and policy analysis;
   assist on regional policy issues and decisions
- Serve as a catalyst to convene, nurture, and facilitate difficult dialogue
- Foster and broker networks and partnerships
- Assist with strategic planning on regional basis
- Provide access to Purdue regional development expertise





# Center for Regional Development

#### **Customers**

- Planning entities
- State and federal agencies (Commerce, Workforce, etc.)
- Local government units
- Business and industry councils
- Local economic development organizations
- Chambers of Commerce
- Private-sector consultants





# Center for Regional Development

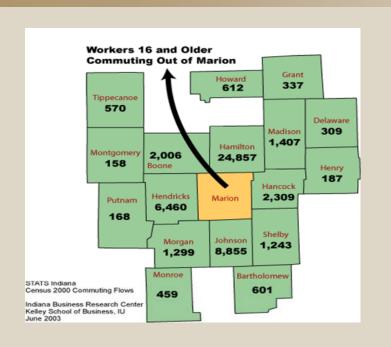
#### **Accomplishments to date:**

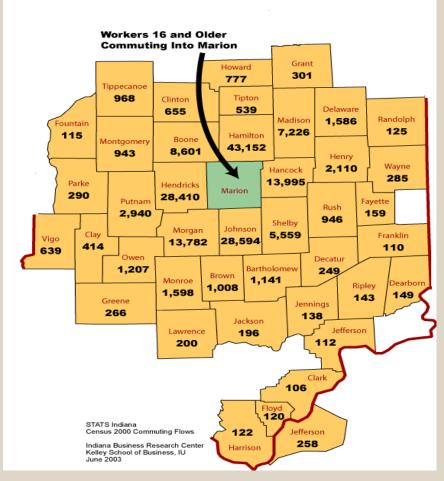
- > \$1.5 million in research and engagement funding
- \$15 million DOL workforce innovation grant
- SBDC host
- DOE Brownfields program host
- 22 projects underway or completed
- 21 external partnerships/relationships established
- Partnered with Cooperative Extension and 6 other entities
- 20 papers and/or presentations on Center work





#### **Projects: Indiana Humanities Council**









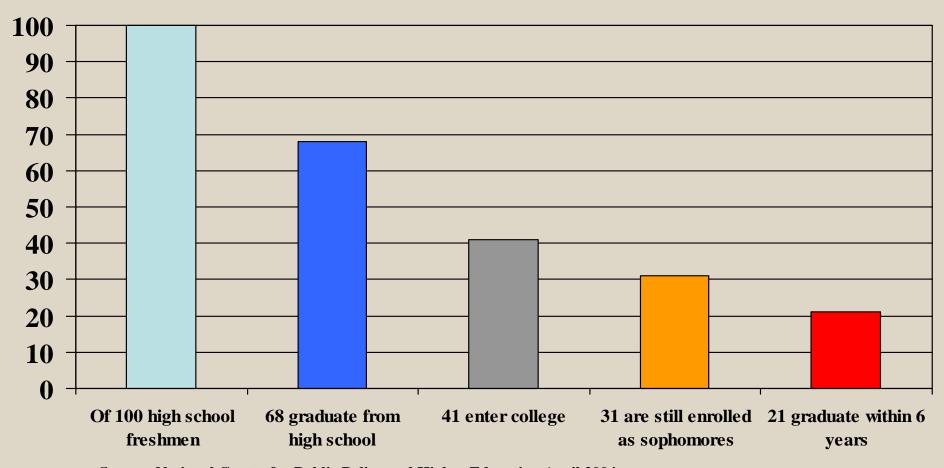
# Goal 2: Enhance P-12 Education

- Students
- Teachers
- Curriculum
- Schools





# Of every 100 Indiana 9th Graders, Only ...



Source: National Center for Public Policy and Higher Education April 2004



#### Science Bound

- Partnership with Indianapolis Public Schools, and the business community to increase number of IPS students attending Purdue in the fields of Engineering, Science, Technology, Agriculture, and Math-Science Education
- Mentoring of students, teachers, parents
- Business sponsorship





#### Camps

- Science and Engineering
- National Youth Sports Program
- -4-H

#### Competitions

- Indiana Association of School Principals
- FIRST Robotics
- Science Fairs





- Project Lead the Way
- Workforce Development
- Community Partnerships
- Other Opportunities
- State leadership forum
- Indiana Council of Economic Education





# Cooperative Extension Service

- 4-H Projects
- School enhancement
- Leadership development

# • Learning Centers

- Partnerships with Extension or other local entities to deliver educational products
- Credit, non-credit, general education, non-degree



# P-12 Teacher Engagement

- Science Outreach
- Gifted Education Resource Institute
- Purdue Literacy Network
- Center for Research and Engagement in Science and Mathematics Education





# **Extension Relationships**

- Protecting Extension's linkage to existing clientele
- Make more university expertise available
  - To serve traditional clientele
  - To serve new clientele
- Engagement mission is the whole university— Extension is a critical component and partner



#### **PURDUE**

UNIVERSITY

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# PU's Extension takes its vision to next level

With its roots firmly planted across Indiana, Purdue Extension for more than a century has been tied to agriculture and 4-H concerns.

Now, a key component of how Purdue is linking

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#### Editorial

# Opportunities await at PU's Discovery Park

The vision that emanates from Purdue University's Discovery Park is one that could help you and millions of Americans live longer and be healthier.

Among the projects or goals of the Bindley Bioscience Center, a \$15 million facility that opened this past weekend, are the following:

 Developing tiny sensors that could be implanted in your body, where they could detect diseases or alert your doctor of irregular blood chemistry.

· Using genes and proteins from plants and ani-

# **Lessons Learned**

- "Need to answer the phone"
- Communications and information is critical
- Ownership by colleges is essential
  - Requires a change in mindset
- Presidential level commitment needed
- Appropriate incentives on campus are essential
- Interdisciplinary, team attitude
- "We can do it" attitude





# **Key Challenges**

- Recognize engagement as a scholarly endeavor of faculty
  - Publications
  - Presentations
  - Awards
- Ownership by colleges
- Funding





# PURDUE UNIVERSITY "ENGAGING INDIANA"

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